IN THE CLAIMS:

Please substitute currently amended claims 8-12, 19, 28, 34, 46-47, 50, and 55-58 for the original claims having the same claim number.

1. (Canceled)

2. (Canceled)

3. (Canceled)

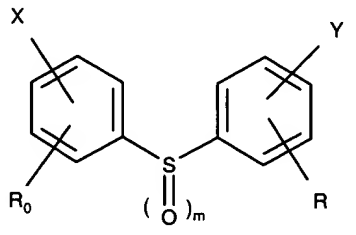
4. (Canceled)

5. (Canceled)

6. (Canceled)

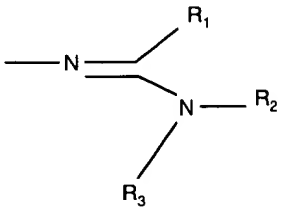
7. (Canceled)

8. (currently amended) A method for promoting ~~neural cell~~ growth or differentiation of neural precursor cells *in vitro*, wherein said cells express at least one protein selected from the group consisting of eNCAM, MAP II, β-tubulin, nestin, NF and NF-PO_4, comprising ~~administering to a mammal~~ exposing said cells to a neural precursor growth or differentiation promoting effective amount of a composition containing a compound having one of the following structural formulas:

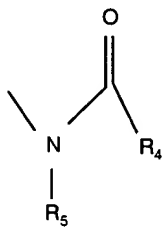


(II)

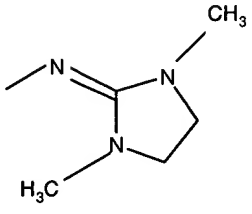
wherein m is 0, 1 or 2; X and Y are independently hydrogen or halogen, nitro, alkoxy or $-NHCOCH_2NHCH_3$; R and R_0 are independently H, halogen or a moiety of one of the following formulas:



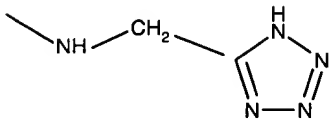
(Ia), or



(Ib), or

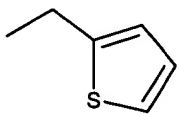


(Ic),



or (Id), or $-N=CHOC_2H_5$ or $-(CH_2)_qCN$ where q is an integer from 1 to 5;

wherein R_1 is hydrogen, or linear or branched alkyl; cycloalkyl or aryl rings, which cycloalkyl or aryl rings can comprise one or more heteroatoms selected from O, N and S and which cycloalkyl or aryl rings can be substituted with linear or branched alkyl, halo, nitro or amino; or R_1 is a moiety of the formula:



(Ie),

R_2 is hydrogen, alkyl or branched alkyl or benzyl;

R_1 and R_2 taken together may be $-(CH_2)_p-$ where p is an integer from 2 to 4 and wherein R_3 is methyl;

R_3 is alkyl, branched alkyl, or cycloalkyl;
R_4 is linear or branched alkyl optionally substituted with 1 or more halogen, amino or alkylamino; or aryl optionally substituted with one or more alkyl, halo, nitro or amino moieties; $-(CH_2)_q CN$ where q is an integer from 1 to 5, $-CH_2COR_6$ or $-CH_2-NR_7R_8$;
R_2 and R_3 taken together with the associated nitrogen can be pyrrolidino, piperidino, morpholino, thiomorpholino, 4-methylpiperazino, 3-azabicyclo[3.2.2]nonyl, azetidino or azaspirol[5,5]undecanoyl;
R_5 is hydrogen, alkyl or branched alkyl; and
R_6, R_7 and R_8 are independently hydrogen, or linear or branched alkyl optionally substituted with 1 or more halo, nitro or amino groups;
and pharmacologically acceptable salts thereof.

9. (currently amended) The method of claim 8, wherein the ~~mammal is human~~ neural precursor cells are obtained from neural tissue or bone marrow.

10. (currently amended) The method of claim ~~8~~ 9, wherein the ~~administering is sufficient to induce a detectable increase in neural expression of at least one protein indicative of neural cell growth or differentiation~~ neural tissue is nervous system tissue.

11. (currently amended) The method of claim 10, wherein ~~the mammal is human~~ the nervous system tissue is central nervous system (CNS) tissue.

12. (currently amended) The method of claim ~~10~~ 8, wherein the ~~administration~~ exposing is effective to promote an increase in the neural expression of one or more proteins selected from the group consisting of : eNCAM, MAP II, β-tubulin, nestin, NF and NF-PO_4, said increase occurring in neural precursor cells obtained from the bone marrow or neural tissue of the mammal.

13. (Canceled)

14. (Canceled)

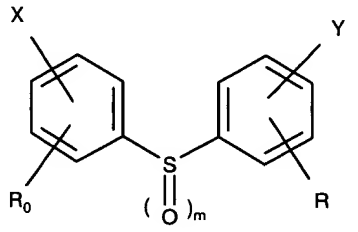
15. (Canceled)

16. (Canceled)

17. (Canceled)

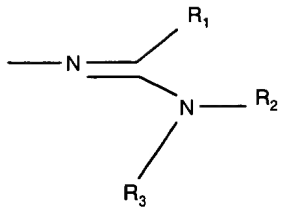
18. (Canceled)

19. (currently amended) A method for promoting ~~recovery~~ growth or differentiation of neural precursor cells *in vitro* ~~expressing neuronal progenitor cell markers~~ after injury to the neuronal cells, wherein said neural precursor cells express at least one protein selected from the group consisting of eNCAM, MAP II, β-tubulin, nestin, NF and NF-PO_4, the method comprising exposing said cells to an effective amount of a composition containing a compound having one of the following structural formulas:

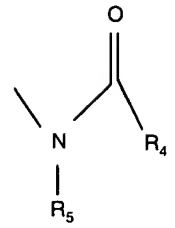


(II)

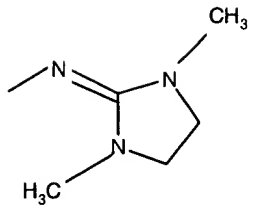
wherein m is 0, 1 or 2; X and Y are independently hydrogen or halogen, nitro, alkoxy or $-NHCOCH_2NHCH_3$; R and R_0 are independently H, halogen or a moiety of one of the following formulas:



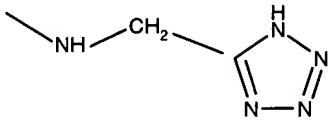
I(a), or



I(b), or

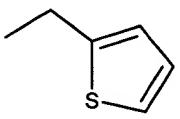


I(c),



or I(d), or –N=CHOC2H5 or –(CH2)qCN where q is an integer from 1 to 5;

wherein R_1 is hydrogen, or linear or branched alkyl; cycloalkyl or aryl rings, which cycloalkyl or aryl rings can comprise one or more heteroatoms selected from O, N and S and which cycloalkyl or aryl rings can be substituted with linear or branched alkyl, halo, nitro or amino; or R_1 is a moiety of the formula:



I(e);

R_2 is hydrogen, alkyl or branched alkyl or benzyl;

R_1 and R_2 taken together may be $-(CH_2)_p-$ where p is an integer from 2 to 4 and wherein

R_3 is methyl;

R_3 is alkyl, branched alkyl, or cycloalkyl;

R_4 is linear or branched alkyl optionally substituted with 1 or more halogen, amino or alkylamino; or aryl optionally substituted with one or more alkyl, halo, nitro or amino moieties; $-(CH_2)_q$ CN where q is an integer from 1 to 5, $-CH_2COR_6$ or $-CH_2-NR_7R_8$;

R_2 and R_3 taken together with the associated nitrogen can be pyrrolidino, piperidino, morpholino, thiomorpholino, 4-methylpiperazino, 3-azabicyclo[3.2.2]nonyl, azetidino or azaspirol[5,5]undecanoyl;

R_5 is hydrogen, alkyl or branched alkyl; and

R_6, R_7 and R_8 are independently hydrogen, or linear or branched alkyl optionally substituted with 1 or more halo, nitro or amino groups;
and pharmacologically acceptable salts thereof.

20. (original) The method of claim 19, wherein the composition additionally comprises a pharmaceutically acceptable carrier.

21. (original) The method of claim 19, wherein the injury to neuronal cells is a result of acute or chronic spinal cord injury, radiation or chemical injury.

22. (original) The method of claim 19, wherein the injury to neuronal cells is caused by chemotherapy or radiation therapy.

23. (original) The method of claim 21, wherein said chemical injury is caused by an excitotoxic agent.

24. (original) The method of claim 23, wherein the excitotoxic agent is glutamate.

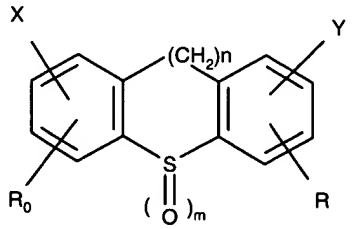
25. (original) The method of claim 19, wherein the injury to neuronal cells is due to a neurodegenerative condition or disease.

26. (original) The method of claim 25 wherein the neurodegenerative condition or disease is selected from the group consisting of multiple sclerosis, Alzheimer's Disease, Parkinson's Disease, amyotrophic lateral sclerosis, Huntington's chorea, spinal cerebellar degeneration, diabetes mellitus, senile dementia and dysplasia.

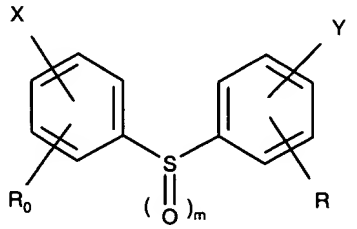
27. (original) The method of claim 19 wherein the injury to neuronal cells is due to surgery.

28. (currently amended) The method of claim 19, wherein the neural precursor cells are obtained from a mammal ~~is a human~~.

29. (Withdrawn) A method for improving learning or memory function in a mammal comprising administering to a mammal a learning improving effective amount or a memory function improving effective amount of a composition containing a compound having one of the following structural formulas:

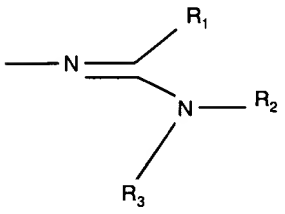


(I) or

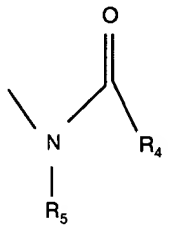


(II)

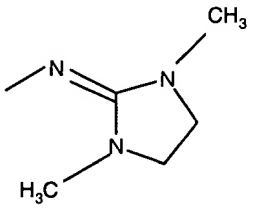
wherein n is 0 or 1,; m is 0, 1 or 2; X and Y are independently hydrogen or halogen, nitro, alkoxy or $-NHCOCH_2NHCH_3$; R and R_0 are independently H, halogen or a moiety of one of the following formulas:



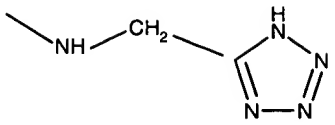
(Ia), or



(Ib), or



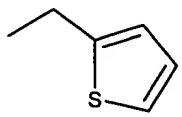
(Ic),



or (Id), or $-N=CHOC_2H_5$ or $-(CH_2)_qCN$ where q is an integer from

1 to 5;

wherein R_1 is hydrogen, or linear or branched alkyl; cycloalkyl or aryl rings, which cycloalkyl or aryl rings can comprise one or more heteroatoms selected from O, N and S and which cycloalkyl or aryl rings can be substituted with linear or branched alkyl, halo, nitro or amino; or R_1 is a moiety of the formula:



(Ie),

R_2 is hydrogen, alkyl or branched alkyl or benzyl;

R_1 and R_2 taken together may be $-(CH_2)_p-$ where p is an integer from 2 to 4 and wherein

R_3 is methyl;

R_3 is alkyl, branched alkyl, or cycloalkyl;

R_4 is linear or branched alkyl optionally substituted with 1 or more halogen, amino or alkylamino; or aryl optionally substituted with one or more alkyl, halo, nitro or amino moieties; $-(CH_2)_q CN$ where q is an integer from 1 to 5, $-CH_2COR_6$ or $-CH_2-NR_7R_8$;

R_2 and R_3 taken together with the associated nitrogen can be pyrrolidino, piperidino, morpholino, thiomorpholino, 4-methylpiperazino, 3-azabicyclo[3.2.2]nonyl, azetidino or azaspirol[5,5]undecanoyl;

R_5 is hydrogen, alkyl or branched alkyl; and

R_6, R_7 and R_8 are independently hydrogen, or linear or branched alkyl optionally substituted with 1 or more halo, nitro or amino groups;

and pharmacologically acceptable salts thereof.

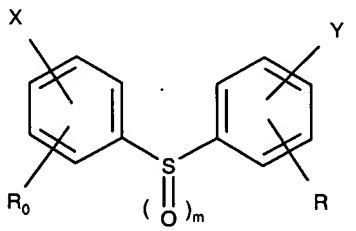
30. (Withdrawn) The method of claim 29, wherein the composition additionally comprises a pharmaceutically acceptable carrier.

31. (Withdrawn) The method of claim 30, wherein the mammal is a human.

32. (Canceled)

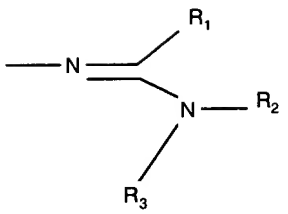
33. (Canceled)

34. (currently amended) A method for promoting growth or differentiation of neural precursor cells, said cells expressing at least one protein selected from the group consisting of eNCAM, MAP II, β-tubulin, nestin, NF and NF-PO_4, comprising administering to a first mammal a neural precursor cell growth or differentiation promoting effective amount of a composition, collecting bone marrow cells from the first mammal and delivering them to a site of injury in the first mammal or in a second mammal; wherein the composition comprises a compound having the formulas:

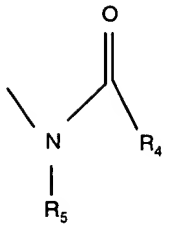


(II)

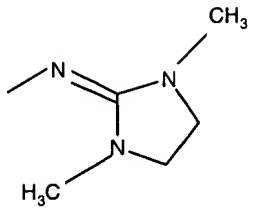
wherein m is 0, 1 or 2; X and Y are independently hydrogen or halogen, nitro, alkoxy or $-NHCOCH_2NHCH_3$; R and R_0 are independently H, halogen or a moiety of one of the following formulas:



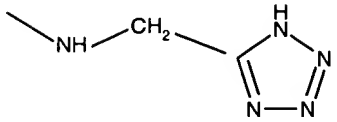
(Ia), or



(Ib), or



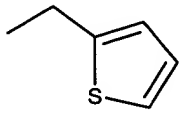
(Ic),



or (Id), or $-N=CHOC_2H_5$ or $-(CH_2)_qCN$ where q is an integer from

1 to 5;

wherein R_1 is hydrogen, or linear or branched alkyl; cycloalkyl or aryl rings, which cycloalkyl or aryl rings can comprise one or more heteroatoms selected from O, N and S and which cycloalkyl or aryl rings can be substituted with linear or branched alkyl, halo, nitro or amino; or R_1 is a moiety of the formula:



(Ie),

R_2 is hydrogen, alkyl or branched alkyl or benzyl;

R_1 and R_2 taken together may be $-(CH_2)_p-$ where p is an integer from 2 to 4 and wherein R_3 is methyl;

R_3 is alkyl, branched alkyl, or cycloalkyl;

R_4 is linear or branched alkyl optionally substituted with 1 or more halogen, amino or alkylamino; or aryl optionally substituted with one or more alkyl, halo, nitro or amino moieties; $-(CH_2)_q$ CN where q is an integer from 1 to 5, $-CH_2COR_6$ or $-CH_2-NR_7R_8$;

R_2 and R_3 taken together with the associated nitrogen can be pyrrolidino, piperidino, morpholino, thiomorpholino, 4-methylpiperazino, 3-azabicyclo[3.2.2]nonyl, azetidino or azaspirol[5,5]undecanoyl;

R_5 is hydrogen, alkyl or branched alkyl; and

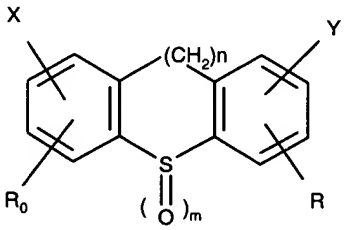
R_6, R_7 and R_8 are independently hydrogen, or linear or branched alkyl optionally substituted with 1 or more halo, nitro or amino groups;

and pharmacologically acceptable salts thereof.

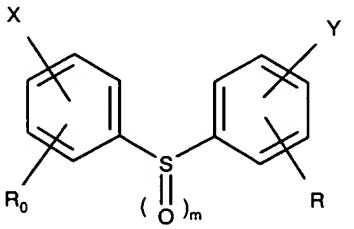
35. (original) The method of claim 34, wherein the cells are delivered to the site of injury in the first mammal.

36. (original) The method of claim 35, wherein the first mammal is human.

37. (Withdrawn) A composition adapted for parenteral administration comprising a compound having the formula:

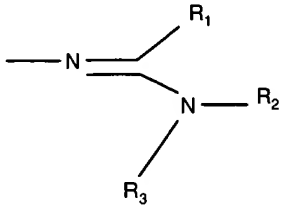


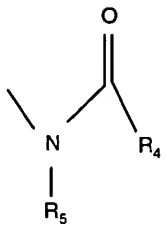
(I) or

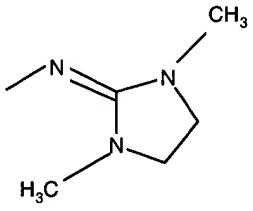


(II)

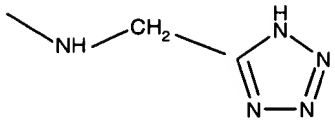
wherein n is 0 or 1,; m is 0, 1 or 2; X and Y are independently hydrogen or halogen, nitro, alkoxy or $-NHCOCH_2NHCH_3$; R and R_0 are independently H, halogen or a moiety of one of the following formulas:





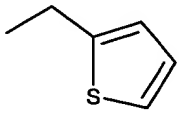


(Ia), or (Ib), or (Ic),



or (Id), or $-N=CHOC_2H_5$ or $-(CH_2)_qCN$ where q is an integer from 1 to 5;

wherein R_1 is hydrogen, or linear or branched alkyl; cycloalkyl or aryl rings, which cycloalkyl or aryl rings can comprise one or more heteroatoms selected from O, N and S and which cycloalkyl or aryl rings can be substituted with linear or branched alkyl, halo, nitro or amino; or R_1 is a moiety of the formula:



(Ie),

R_2 is hydrogen, alkyl or branched alkyl or benzyl;

R_1 and R_2 taken together may be $-(CH_2)_p-$ where p is an integer from 2 to 4 and wherein R_3 is methyl;

R_3 is alkyl, branched alkyl, or cycloalkyl;

R_4 is linear or branched alkyl optionally substituted with 1 or more halogen, amino or alkylamino; or aryl optionally substituted with one or more alkyl, halo, nitro or amino moieties; $-(CH_2)_q$ CN where q is an integer from 1 to 5, $-CH_2COR_6$ or $-CH_2-NR_7R_8$;

R_2 and R_3 taken together with the associated nitrogen can be pyrrolidino, piperidino, morpholino, thiomorpholino, 4-methylpiperazino, 3-azabicyclo[3.2.2]nonyl, azetidino or azaspirol[5,5]undecanoyl;

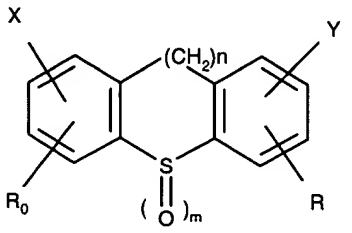
R_5 is hydrogen, alkyl or branched alkyl; and

R_6, R_7 and R_8 are independently hydrogen, or linear or branched alkyl optionally substituted with 1 or more halo, nitro or amino groups;

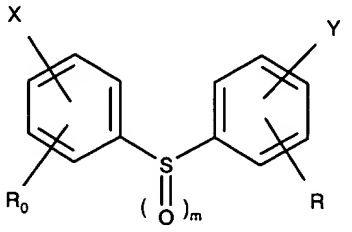
and pharmacologically acceptable salts thereof; and a parentally and pharmaceutically acceptable carrier.

38. (Withdrawn) The composition of claim 37, wherein the composition is adapted for intralesional or intrathecal administration.

39. (Withdrawn) A composition, optionally adapted for parenteral administration, comprising one or more cells obtained from a mammal subsequent to administration to the mammal of at least one compound of one of the following formulas:

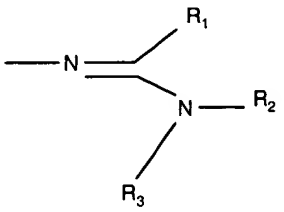


(I) or

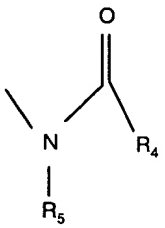


(II)

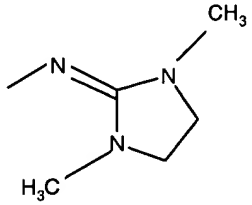
wherein n is 0 or 1,; m is 0, 1 or 2; X and Y are independently hydrogen or halogen, nitro, alkoxy or $-NHCOCH_2NHCH_3$; R and R_0 are independently H, halogen or a moiety of one of the following formulas:



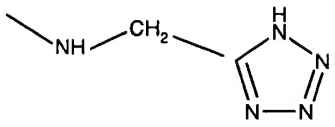
(Ia), or



(Ib), or



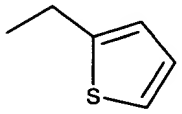
(Ic),



or (Id), or $-N=CHOC_2H_5$ or $-(CH_2)_qCN$ where q is an integer from

1 to 5;

wherein R_1 is hydrogen, or linear or branched alkyl; cycloalkyl or aryl rings, which cycloalkyl or aryl rings can comprise one or more heteroatoms selected from O, N and S and which cycloalkyl or aryl rings can be substituted with linear or branched alkyl, halo, nitro or amino; or R_1 is a moiety of the formula:



(Ie),

R_2 is hydrogen, alkyl or branched alkyl or benzyl;

R_1 and R_2 taken together may be $-(CH_2)_p-$ where p is an integer from 2 to 4 and wherein R_3 is methyl;

R_3 is alkyl, branched alkyl, or cycloalkyl;

R_4 is linear or branched alkyl optionally substituted with 1 or more halogen, amino or alkylamino; or aryl optionally substituted with one or more alkyl, halo, nitro or amino moieties; $-(CH_2)_q CN$ where q is an integer from 1 to 5, $-CH_2COR_6$ or $-CH_2-NR_7R_8$;

R_2 and R_3 taken together with the associated nitrogen can be pyrrolidino, piperidino, morpholino, thiomorpholino, 4-methylpiperazino, 3-azabicyclo[3.2.2]nonyl, azetidino or azaspirol[5,5]undecanoyl;

R_5 is hydrogen, alkyl or branched alkyl; and

R_6, R_7 and R_8 are independently hydrogen, or linear or branched alkyl optionally substituted with 1 or more halo, nitro or amino groups;

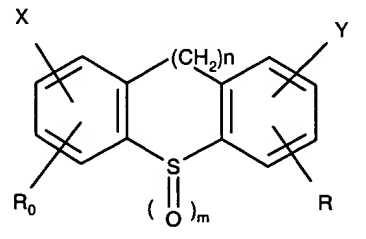
and pharmacologically acceptable salts thereof.

40. (Withdrawn) The method of claim 39, wherein the composition additionally comprises a pharmaceutically acceptable carrier.

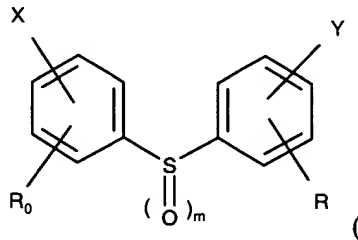
41. (Withdrawn) The composition of claim 40, wherein the composition is adapted for intralesional or intrathecal administration.

42. (Withdrawn) The composition of claim 40, wherein the composition additionally comprises a compound of formula (I) or (II).

43. (Withdrawn) A method for promoting the proliferation or differentiation of progenitor cells comprising contacting the progenitor cells with a proliferation effective or differentiation effective amount of a compound having one of the following structural formulas:

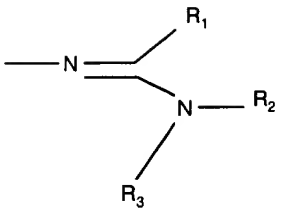


(I) or

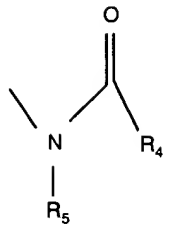


(II)

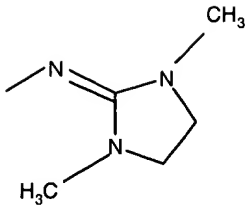
wherein n is 0 or 1,; m is 0, 1 or 2; X and Y are independently hydrogen or halogen, nitro, alkoxy or $-NHCOCH_2NHCH_3$; R and R_0 are independently H, halogen or a moiety of one of the following formulas:



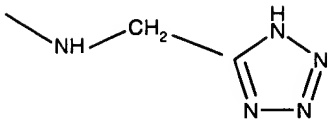
(Ia), or



(Ib), or



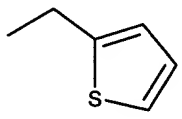
(Ic),



or (Id), or $-N=CHOC_2H_5$ or $-(CH_2)_qCN$ where q is an integer from

1 to 5;

wherein R_1 is hydrogen, or linear or branched alkyl; cycloalkyl or aryl rings, which cycloalkyl or aryl rings can comprise one or more heteroatoms selected from O, N and S and which cycloalkyl or aryl rings can be substituted with linear or branched alkyl, halo, nitro or amino; or R_1 is a moiety of the formula:



(Ie),

R_2 is hydrogen, alkyl or branched alkyl or benzyl;

R_1 and R_2 taken together may be $-(CH_2)_p-$ where p is an integer from 2 to 4 and wherein

R_3 is methyl;

R_3 is alkyl, branched alkyl, or cycloalkyl;

R_4 is linear or branched alkyl optionally substituted with 1 or more halogen, amino or alkylamino; or aryl optionally substituted with one or more alkyl, halo, nitro or amino moieties; $-(CH_2)_q CN$ where q is an integer from 1 to 5, $-CH_2COR_6$ or $-CH_2-NR_7R_8$;

R_2 and R_3 taken together with the associated nitrogen can be pyrrolidino, piperidino, morpholino, thiomorpholino, 4-methylpiperazino, 3-azabicyclo[3.2.2]nonyl, azetidino or azaspirol[5,5]undecanoyl;

R_5 is hydrogen, alkyl or branched alkyl; and

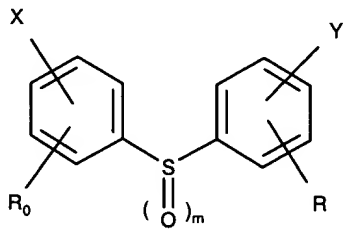
R_6, R_7 and R_8 are independently hydrogen, or linear or branched alkyl optionally substituted with 1 or more halo, nitro or amino groups;

and pharmacologically acceptable salts thereof.

44. (Withdrawn) The method of claim 43, wherein the progenitor cells are neural progenitor cells.

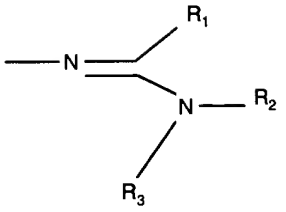
45. (Withdrawn) The method of claim 43, wherein the progenitor cells are bone marrow cells.

46. (currently amended) A method for treating an injury to neuronal cells, said cells expressing at least one protein selected from the group consisting of MAP II, β-tubulin, NF and NF-PO_4, comprising exposing said cells to an effective amount of a composition containing a compound having one of the following structural formulas:

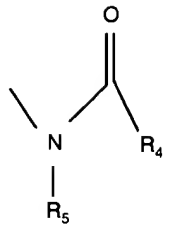


(II)

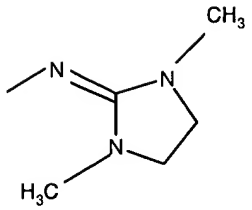
wherein m is 0, 1 or 2; X and Y are independently hydrogen or halogen, nitro, alkoxy or $-NHCOCH_2NHCH_3$; R and R_0 are independently H, halogen or a moiety of one of the following formulas:



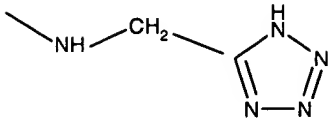
(Ia), or



(Ib), or



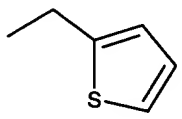
(Ic),



or (Id), or $-N=CHOC_2H_5$ or $-(CH_2)_qCN$ where q is an integer from

1 to 5;

wherein R_1 is hydrogen, or linear or branched alkyl; cycloalkyl or aryl rings, which cycloalkyl or aryl rings can comprise one or more heteroatoms selected from O, N and S and which cycloalkyl or aryl rings can be substituted with linear or branched alkyl, halo, nitro or amino; or R_1 is a moiety of the formula:



(Ie),

R_2 is hydrogen, alkyl or branched alkyl or benzyl;

R_1 and R_2 taken together may be $-(CH_2)_p-$ where p is an integer from 2 to 4 and wherein

R_3 is methyl;

R_3 is alkyl, branched alkyl, or cycloalkyl;

R_4 is linear or branched alkyl optionally substituted with 1 or more halogen, amino or alkylamino; or aryl optionally substituted with one or more alkyl, halo, nitro or amino moieties; $-(CH_2)_q$ CN where q is an integer from 1 to 5, $-CH_2COR_6$ or $-CH_2-NR_7R_8$;

R_2 and R_3 taken together with the associated nitrogen can be pyrrolidino, piperidino, morpholino, thiomorpholino, 4-methylpiperazino, 3-azabicyclo[3.2.2]nonyl, azetidino or azaspirol[5,5]undecanoyl;
R_5 is hydrogen, alkyl or branched alkyl; and
R_6, R_7 and R_8 are independently hydrogen, or linear or branched alkyl optionally substituted with 1 or more halo, nitro or amino groups;
and pharmacologically acceptable salts thereof; wherein said exposing is effective to promote the neural precursor cell expression of at least one protein selected from the group consisting of : eNCAM, MAP II, β-tubulin, nestin, NF and NF-PO_4 .

47. (currently amended) The method of claim 46, wherein the injury to ~~neuronal~~ neural precursor cells is caused by acute or chronic spinal cord injury, radiation or chemical injury.

48. (original) The method of claim 47, wherein the chemical injury is caused by an excitotoxic agent.

49. (original) The method of claim 48, wherein the excitotoxic agent is glutamate.

50. (currently amended) The method of claim 46, wherein the injury to ~~neuronal~~ neural precursor cells is caused by chemotherapy or radiation therapy.

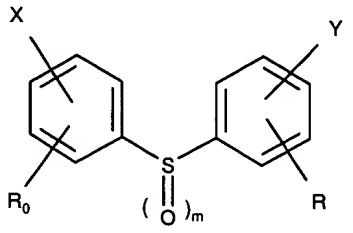
51. (original) The method of claim 46, wherein the mammal is a human.

52. (canceled)

53. (canceled)

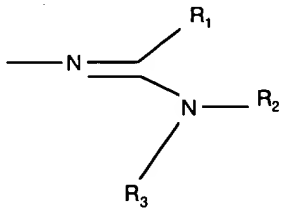
54. (canceled)

55. (currently amended) A method for ~~treating injury to neurons resulting from surgery~~ increasing the number of neural precursor cells expressing at least one protein selected from the group consisting of eNCAM and nestin, comprising ~~administering to a mammal a neural injury treating~~ contacting said cells with an effective amount of a composition containing a compound having one of the following structures:

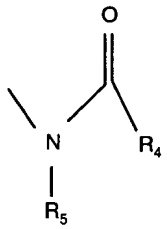


(II)

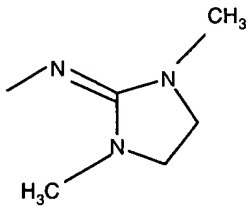
wherein m is 0, 1 or 2; X and Y are independently hydrogen or halogen, nitro, alkoxy or $-NHCOCH_2NHCH_3$; R and R_0 are independently H, halogen or a moiety of one of the following formulas:



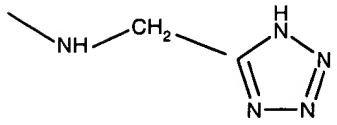
(Ia), or



(Ib), or

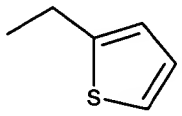


(Ic),



or (Id), or $-N=CHOC_2H_5$ or $-(CH_2)_qCN$ where q is an integer from 1 to 5;

wherein R_1 is hydrogen, or linear or branched alkyl; cycloalkyl or aryl rings, which cycloalkyl or aryl rings can comprise one or more heteroatoms selected from O, N and S and which cycloalkyl or aryl rings can be substituted with linear or branched alkyl, halo, nitro or amino; or R_1 is a moiety of the formula:



(Ie),

R_2 is hydrogen, alkyl or branched alkyl or benzyl;

R_1 and R_2 taken together may be $-(CH_2)_p-$ where p is an integer from 2 to 4 and wherein R_3 is methyl;

R_3 is alkyl, branched alkyl, or cycloalkyl;

R_4 is linear or branched alkyl optionally substituted with 1 or more halogen, amino or alkylamino; or aryl optionally substituted with one or more alkyl, halo, nitro or amino moieties; $-(CH_2)_q CN$ where q is an integer from 1 to 5, $-CH_2COR_6$ or $-CH_2-NR_7R_8$;

R_2 and R_3 taken together with the associated nitrogen can be pyrrolidino, piperidino, morpholino, thiomorpholino, 4-methylpiperazino, 3-azabicyclo[3.2.2]nonyl, azetidino or azaspirol[5,5]undecanoyl;

R_5 is hydrogen, alkyl or branched alkyl; and

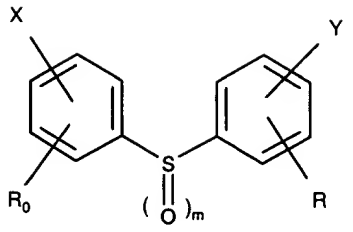
R_6, R_7 and R_8 are independently hydrogen, or linear or branched alkyl optionally substituted with 1 or more halo, nitro or amino groups;

and pharmacologically acceptable salts thereof .

56. (currently amendedl) The method of claim 55, wherein the ~~mammal is a human~~ neural precursor cells are mammalian cells.

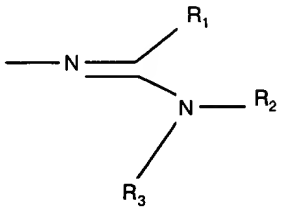
57. (currently amended) A method for promoting growth and differentiation of neural precursor cells in a mammal in need of such therapy, comprising

(a) administering ~~to~~ a population of neural precursor cells obtained from a first mammal treated with a compound having one of the following structural formulas:

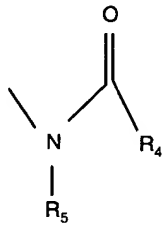


(II)

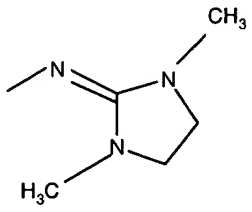
wherein m is 0, 1 or 2; X and Y are independently hydrogen or halogen, nitro, alkoxy or $-NHCOCH_2NHCH_3$; R and R_0 are independently H, halogen or a moiety of one of the following formulas:



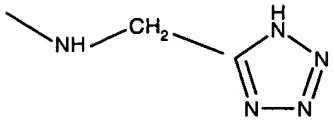
(Ia), or



(Ib), or



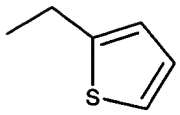
(Ic),



or (Id), or $-N=CHOC_2H_5$ or $-(CH_2)_qCN$ where q is an integer from

1 to 5;

wherein R_1 is hydrogen, or linear or branched alkyl; cycloalkyl or aryl rings, which cycloalkyl or aryl rings can comprise one or more heteroatoms selected from O, N and S and which cycloalkyl or aryl rings can be substituted with linear or branched alkyl, halo, nitro or amino; or R_1 is a moiety of the formula:



(Ie),

R_2 is hydrogen, alkyl or branched alkyl or benzyl;

R_1 and R_2 taken together may be $-(CH_2)_p-$ where p is an integer from 2 to 4 and wherein

R_3 is methyl;

R_3 is alkyl, branched alkyl, or cycloalkyl;

R_4 is linear or branched alkyl optionally substituted with 1 or more halogen, amino or alkylamino; or aryl optionally substituted with one or more alkyl, halo, nitro or amino moieties; $-(CH_2)_q$ CN where q is an integer from 1 to 5, $-CH_2COR_6$ or $-CH_2-NR_7R_8$;

R_2 and R_3 taken together with the associated nitrogen can be pyrrolidino, piperidino, morpholino, thiomorpholino, 4-methylpiperazino, 3-azabicyclo[3.2.2]nonyl, azetidino or azaspirol[5,5]undecanoyl;

R_5 is hydrogen, alkyl or branched alkyl; and

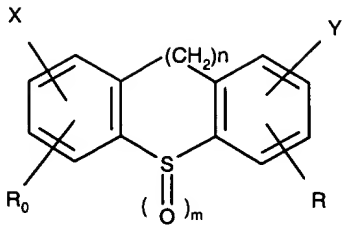
R_6, R_7 and R_8 are independently hydrogen, or linear or branched alkyl optionally substituted with 1 or more halo, nitro or amino groups;

and pharmacologically acceptable salts thereof.; and

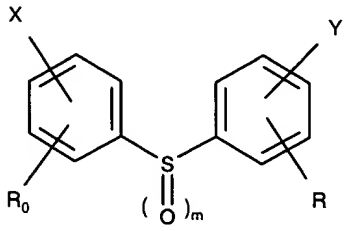
b) collecting ~~stem~~ neural precursor cells expressing at least one protein selected from the group consisting of eNCAM and nestin, from said first mammal and delivering said cells to a site of injury in the first mammal or to a site of injury in a second mammal in need of such therapy.

58. (currently amended) The method of claim 57, wherein the first or second mammal is a human.

59. (Withdrawn) A method of treating a liver disease or condition associated with a decrease in liver function or cellular death or dysfunction comprising administering to a mammal a liver disease or condition treating effective amount of a composition containing a compound having one of the following structural formulas:

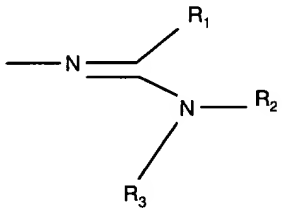


(I) or

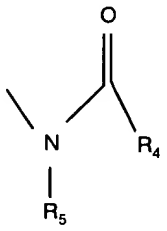


(II)

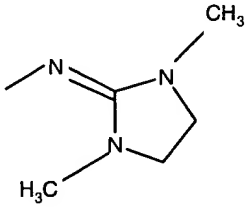
wherein n is 0 or 1,; m is 0, 1 or 2; X and Y are independently hydrogen or halogen, nitro, alkoxy or $-NHCOCH_2NHCH_3$; R and R_0 are independently H, halogen or a moiety of one of the following formulas:



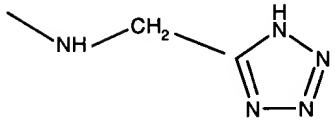
(Ia), or



(Ib), or

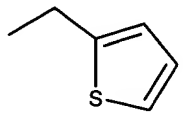


(Ic),



or (Id), or $-N=CHOC_2H_5$ or $-(CH_2)_qCN$ where q is an integer from 1 to 5;

wherein R_1 is hydrogen, or linear or branched alkyl; cycloalkyl or aryl rings, which cycloalkyl or aryl rings can comprise one or more heteroatoms selected from O, N and S and which cycloalkyl or aryl rings can be substituted with linear or branched alkyl, halo, nitro or amino; or R_1 is a moiety of the formula:



(Ie),

R_2 is hydrogen, alkyl or branched alkyl or benzyl;

R_1 and R_2 taken together may be $-(CH_2)_p-$ where p is an integer from 2 to 4 and wherein R_3 is methyl;

R_3 is alkyl, branched alkyl, or cycloalkyl;

R_4 is linear or branched alkyl optionally substituted with 1 or more halogen, amino or alkylamino; or aryl optionally substituted with one or more alkyl, halo, nitro or amino moieties; $-(CH_2)_q CN$ where q is an integer from 1 to 5, $-CH_2COR_6$ or $-CH_2-NR_7R_8$;

R_2 and R_3 taken together with the associated nitrogen can be pyrrolidino, piperidino, morpholino, thiomorpholino, 4-methylpiperazino, 3-azabicyclo[3.2.2]nonyl, azetidino or azaspirol[5,5]undecanoyl;

R_5 is hydrogen, alkyl or branched alkyl; and

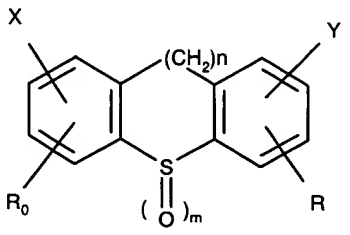
R_6, R_7 and R_8 are independently hydrogen, or linear or branched alkyl optionally substituted with 1 or more halo, nitro or amino groups;

and pharmacologically acceptable salts thereof.

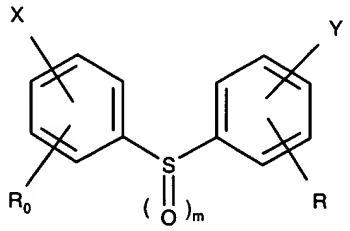
60. (Withdrawn) The method of claim 59, wherein the liver disease or condition is cirrhosis, non-cirrhotic fibrosis of the liver, hepatitis associated with toxin or drug exposure or hepatitis associated with an infectious microorganism.

61. (Withdrawn) The method of claim 59, wherein the mammal is a human.

62. (Withdrawn) A method for repairing damaged liver tissue comprising administering to a mammal a liver repairing effective amount of a composition containing a compound having one of the following structural formulas:

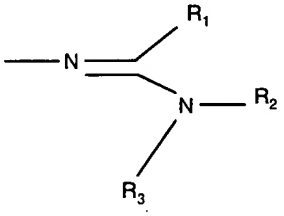


(I) or

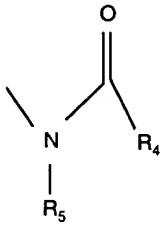


(II)

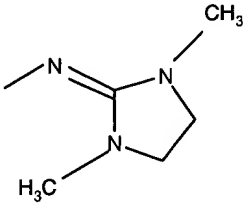
wherein n is 0 or 1,; m is 0, 1 or 2; X and Y are independently hydrogen or halogen, nitro, alkoxy or $-NHCOCH_2NHCH_3$; R and R_0 are independently H, halogen or a moiety of one of the following formulas:



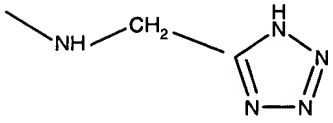
(Ia), or



(Ib), or



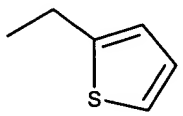
(Ic),



or (Id), or $-N=CHOC_2H_5$ or $-(CH_2)_qCN$ where q is an integer from

1 to 5;

wherein R_1 is hydrogen, or linear or branched alkyl; cycloalkyl or aryl rings, which cycloalkyl or aryl rings can comprise one or more heteroatoms selected from O, N and S and which cycloalkyl or aryl rings can be substituted with linear or branched alkyl, halo, nitro or amino; or R_1 is a moiety of the formula:



(Ie),

R_2 is hydrogen, alkyl or branched alkyl or benzyl;

R_1 and R_2 taken together may be $-(CH_2)_p-$ where p is an integer from 2 to 4 and wherein R_3 is methyl;

R_3 is alkyl, branched alkyl, or cycloalkyl;

R_4 is linear or branched alkyl optionally substituted with 1 or more halogen, amino or alkylamino; or aryl optionally substituted with one or more alkyl, halo, nitro or amino moieties; $-(CH_2)_q CN$ where q is an integer from 1 to 5, $-CH_2COR_6$ or $-CH_2-NR_7R_8$;

R_2 and R_3 taken together with the associated nitrogen can be pyrrolidino, piperidino, morpholino, thiomorpholino, 4-methylpiperazino, 3-azabicyclo[3.2.2]nonyl, azetidino or azaspirol[5,5]undecanoyl;

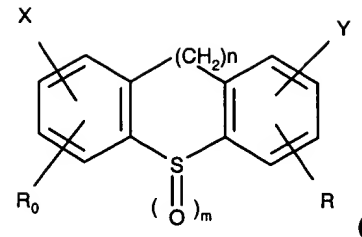
R_5 is hydrogen, alkyl or branched alkyl; and

R_6, R_7 and R_8 are independently hydrogen, or linear or branched alkyl optionally substituted with 1 or more halo, nitro or amino groups;

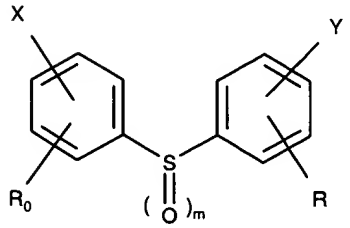
and pharmacologically acceptable salts thereof.

63. (Withdrawn) The method of claim 62, wherein the mammal is a human.

64. (Withdrawn) A method for growing cells in vitro or in vivo comprising contacting the cells with a compound having one of the following structural formulas:

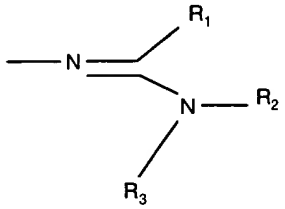


(I) or

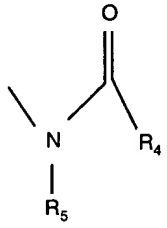


(II)

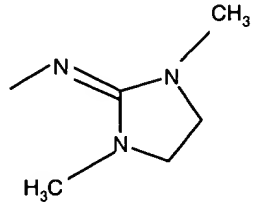
wherein n is 0 or 1,; m is 0, 1 or 2; X and Y are independently hydrogen or halogen, nitro, alkoxy or $-NHCOCH_2NHCH_3$; R and R_0 are independently H, halogen or a moiety of one of the following formulas:



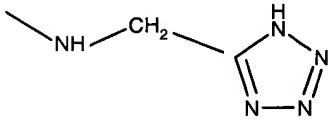
(Ia), or



(Ib), or

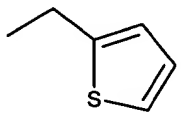


(Ic),



or (Id), or $-N=CHOC_2H_5$ or $-(CH_2)_qCN$ where q is an integer from 1 to 5;

wherein R_1 is hydrogen, or linear or branched alkyl; cycloalkyl or aryl rings, which cycloalkyl or aryl rings can comprise one or more heteroatoms selected from O, N and S and which cycloalkyl or aryl rings can be substituted with linear or branched alkyl, halo, nitro or amino; or R_1 is a moiety of the formula:



(Ie),

R_2 is hydrogen, alkyl or branched alkyl or benzyl;

R_1 and R_2 taken together may be $-(CH_2)_p-$ where p is an integer from 2 to 4 and wherein R_3 is methyl;

R_3 is alkyl, branched alkyl, or cycloalkyl;

R_4 is linear or branched alkyl optionally substituted with 1 or more halogen, amino or alkylamino; or aryl optionally substituted with one or more alkyl, halo, nitro or amino moieties; $-(CH_2)_q$ CN where q is an integer from 1 to 5, $-CH_2COR_6$ or $-CH_2-NR_7R_8$;

R_2 and R_3 taken together with the associated nitrogen can be pyrrolidino, piperidino, morpholino, thiomorpholino, 4-methylpiperazino, 3-azabicyclo[3.2.2]nonyl, azetidino or azaspirol[5,5]undecanoyl;

R_5 is hydrogen, alkyl or branched alkyl; and

R_6, R_7 and R_8 are independently hydrogen, or linear or branched alkyl optionally substituted with 1 or more halo, nitro or amino groups;

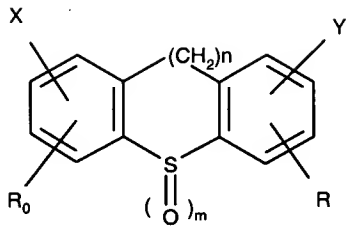
and pharmacologically acceptable salts thereof.

65. (Withdrawn) The method of claim 64, wherein the cells are liver cells.

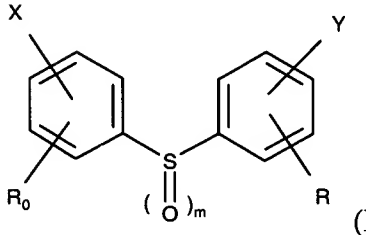
66. (Withdrawn) A method for growth of liver cells in culture for use in transplants comprising

(a) removing living liver cells from a first patient;

(b) placing the liver tissue in a medium supplemented with a compound having one of the following structural formulas:

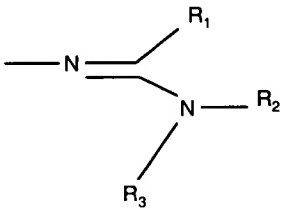


(I) or

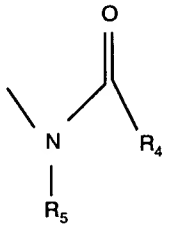


(II)

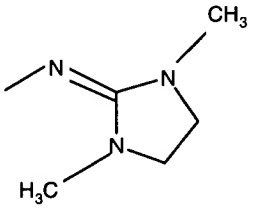
wherein n is 0 or 1,; m is 0, 1 or 2; X and Y are independently hydrogen or halogen, nitro, alkoxy or $-NHCOCH_2NHCH_3$; R and R_0 are independently H, halogen or a moiety of one of the following formulas:



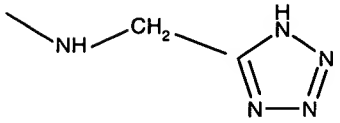
(Ia), or



(Ib), or



(Ic),

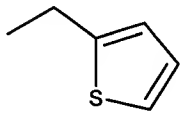


or (Id), or $-N=CHOC_2H_5$ or $-(CH_2)_qCN$ where q is an integer from

1 to 5;

wherein R_1 is hydrogen, or linear or branched alkyl; cycloalkyl or aryl rings, which cycloalkyl or aryl rings can comprise one or more heteroatoms selected from O, N and S

and which cycloalkyl or aryl rings can be substituted with linear or branched alkyl, halo, nitro or amino; or R_1 is a moiety of the formula:



(Ie),

R_2 is hydrogen, alkyl or branched alkyl or benzyl;

R_1 and R_2 taken together may be $-(CH_2)_p-$ where p is an integer from 2 to 4 and wherein R_3 is methyl;

R_3 is alkyl, branched alkyl, or cycloalkyl;

R_4 is linear or branched alkyl optionally substituted with 1 or more halogen, amino or alkylamino; or aryl optionally substituted with one or more alkyl, halo, nitro or amino moieties; $-(CH_2)_q CN$ where q is an integer from 1 to 5, $-CH_2COR_6$ or $-CH_2-NR_7R_8$;

R_2 and R_3 taken together with the associated nitrogen can be pyrrolidino, piperidino, morpholino, thiomorpholino, 4-methylpiperazino, 3-azabicyclo[3.2.2]nonyl, azetidino or azaspirol[5,5]undecanoyl;

R_5 is hydrogen, alkyl or branched alkyl; and

R_6, R_7 and R_8 are independently hydrogen, or linear or branched alkyl optionally substituted with 1 or more halo, nitro or amino groups;

and pharmacologically acceptable salts thereof;

(c) incubating the cells to allow expansion of the cells; and

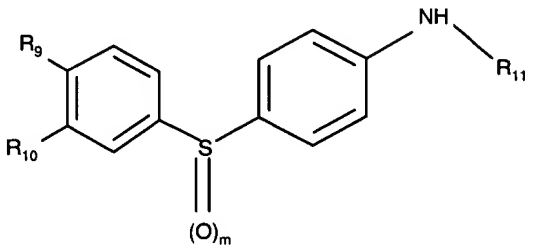
(d) transferring the cells back to a second patient;

wherein the first patient and the second patient can be the same or different.

67. (previously presented) The method of claim 8, wherein the composition additionally comprises a pharmaceutically acceptable carrier.

68. (previously presented) The method of claim 67, wherein the composition is administered intralesionally.

69. (previously presented) The method of claim 8, wherein the composition comprises a compound of the following formula:



wherein m is 0, 1 or 2; R_9 is hydrogen, fluoro, chloro, bromo, nitro, alkoxy having up to 3 carbon atoms or $-NHCOCH_2NHCH_3$; R_{10} is hydrogen or chloro; and R_{11} is $-(CH_2)_qCN$ wherein q is an integer from 1 to 5, $-COCH_2NH_2$, $-COCH_2NHCH_3$, $-COCH_2Cl$, $-COCH_2CH_2Cl$ or $-C(O)R_{12}$ wherein R_{12} is an alkyl group having up to 4 carbon atoms; and pharmaceutically acceptable salts thereof.

70. (previously presented) The method of claim 69, wherein the composition additionally comprises a pharmaceutically acceptable carrier.

71. (previously presented) The method of claim 69, wherein R_9 is fluoro, m is 2, and R_{11} is $-C(O)R_{12}$ and R_{10} is hydrogen.

72. (previously presented) The method of claim 71, wherein the compound is N-[4-[4-fluorophenyl)sulfonyl]phenyl]acetamide.

73. (previously presented) A method for treating a spinal cord injury in a mammal, comprising administering a population of neuronal stem cells or progenitor cells obtained from a first mammal treated with N-[4-[4-fluorophenyl)sulfonyl]phenyl]acetamide, and delivering the cells to the site of injury in the first mammal or to a second mammal.

74. (previously presented) The method of claim 73, wherein said neuronal stem cells or progenitor cells are obtained from neural tissue or from the bone marrow of said mammal.